Case Study

NOV delivers largest choke for a pipeline in Alaska

12-in. choke provides superior flow and pressure control

Case study facts

Location: Alaska

Customer: Confidential

Timeframe: January 2021

Results:

- 12 in. is the largest choke we have delivered for a pipeline.
- The operator is replacing control valves with our chokes.

Background

An operator in Alaska needed a 12-in. choke for an onshore oil pipeline that could control high flow rates and pressure. While the operator initially wanted a choke valve body because of the low pressures, the design switched to an angle body because of the big flange and forging sizes and since the piping was not yet installed.

Solutions

NOV designed, engineered, and delivered our largest-ever choke for a pipeline. The MPX-100 plug and cage choke is designed for lower pressure drops and high flow rates. It features a large Cv and our first 20-in. flanges.

The choke body includes a tungsten carbide cage and an external sleeve for advanced wear resistance and superior protection of downstream equipment.

Due to the big choke size, our design team removed the threaded seat and kept the cage unthreaded to make the installation easier. Also, the lighter and shorter bonnet and fewer actuator mounting components reduced costs and weight.

Results

Our robust choke continues to perform reliably for the operator. The large choke controls flow and pressure and protects downstream equipment from damage. With fewer parts, the choke is low maintenance, and the operator can easily change out the trim. Because of the choke's high performance, the operator is replacing its control valves with our chokes.